REMARKS/ARGUMENTS

As background, this is the fourth Office Action issued in this case with one RCE having been filed to continue the prosecution. In the prior Amendment, Applicant amended the independent claims to include limitations that were presented in the originally filed dependent claims and also to clarify previously submitted claim language. However, another search was performed by the Examiner, and with the April 5, 2006 Office Action, the main references that have been used previously by the Examiner from the first Office Action as anticipatory references have been supplemented with newly cited references to again reject the pending claims (i.e., all 35 U.S.C. §102 rejections have been withdrawn and the substantive rejections are now 35 U.S.C. §103 rejections). Applicant believes this Amendment addresses and distinguishes all the cited references but objects to new references being added so late in the prosecution process when the claim amendments did not introduce new issues that required additional searching.

Prior to this Amendment, Claims 1-4, 6-10, 12-15, 17-36, 38-59, and 61-68 were pending in the patent application.

Independent claim 1 is amended to clarify the antecedent basis for the "preselected criterion" limitation. Claim 1 is also amended to stress that the raw TCP/IP data associated with a complete communication session is monitored, stored, and tested such that the preselected criterion may be located in the raw TCP/IP data such as the TCP control information, the TCP state information, and also the data payload. Support for this amendment can be found in lines 1-5 of page 3, lines 11-15 of page 4, and lines 10-16 of page 5, and this amendment helps distinguish the method of claim 1 from prior filtering/monitoring that is performed solely on the control information or solely on data in a single data packet. Dependent claims 4 and 19 are amended to clarify that a user can assign a weight to a regular expression of a criterion.

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Independent claim 34 is amended to include the limitations of dependent claims 39 and 41 and additional clarifying language. Dependent claims 38-41 and 43 are cancelled.

Independent claim 55 is amended to stress the normalizing function of the invention as discussed in Applicant's specification beginning at page 5, line 14. In this manner, the method allows a single set of criteria or regular expressions to be applied to network communications regardless of the original format or protocol of the communications.

Dependent claim 68 is amended to further define the use of protocol matching to enhance processing of a data stream as indicated at page 5, lines 10-16 of Applicant's specification.

Dependent claims 31, 33, 52, 54, and 64 are amended to clarify that reporting of communications that include user-selected criterion or exceed a threshold includes providing a view of the stored TCP/IP network communication (e.g., such as the TCP session user data payload) as it was seen and/or generated by the monitored network user (e.g., the e-mail, the web page, the pdf attachment, the text document, or the like is rendered rather than simply displaying string of illegible characters). No new matter is added by this amendment with support found at least at page 12, lines 12-17.

After entry of the Amendment, claims 1-4, 6-10, 12-15, 17-36, 42, 44-59, and 61-68 remain for consideration by the Examiner.

Rejections under 35 U.S.C §112

The Office Action rejected claims 1, 2, 6, 14, 27, 28, 30, 32, and 39 as being indefinite due to lack of antecedent basis for the limitation "the preselected criterion." Claim 1 is amended to address this rejection as suggested by the Examiner.

Rejections under 35 U.S.C. §103

The Office Action rejected claims 1-4, 6-8, 12, 13, 15, 17-21, 23, 27-33, and 65-67 under 35 U.S.C. §103(a) as being unpatentable over "Implementing a Generalized Tool for Network Monitoring" ("Ranum") in view of U.S. Pat. No. 6,266,664 ("Russell-Falla") and U.S. Pat. No. 6,453,345 ("Trcka"). This rejection is traversed based on the following remarks.

Before turning to the rejections of claim 1 presented in the Office Action, it may be useful to explain why the claim limitations added with this Amendment distinguish the method of claim 1 from the three cited references. As amended, claim 1 calls for "monitoring TCP/IP network communications" and "storing raw TCP/IP session data for said TCP/IP network communications on disk." Then, the stored communications are tested for a preselected criterion "wherein the raw TCP/IP session data including all TCP control and payload data is tested for the presence of the at least one preselected criterion." This process is discussed in Applicant's specification at least on page 4, beginning at line 11 where the method is involves storing each TCP/IP half-session to a file or log and then searching the raw data "for the user-selected criterion." In other words, monitoring, searching, and communication storing is performed by processing TCP control information and TCP payloads or the actual user data together (e.g., processing a complete or whole captured network session rather than select processing of portions of network traffic).

In contrast, Trcka describes a simple filtering mechanism (see, for example, col. 15, beginning at line 45). This filtering mechanism is applied to each data packet on an individual basis, and, as a result, ignores control data and would produce a very different result than a testing process that looks at multiple packets or data payloads of a complete communication or session along with control data. Ranum's N-Code packer filters are also applied to individual TCP packets and also to the state of the TCP connection. Hence, Ranum does not describe or teach the monitoring, storing, and testing of claim 1 because it does not teach applying its filtering mechanism or N-

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Code to a complete bi-directional TCP session (e.g., "both TCP control data and at least one user data payload is tested" from raw TCP/IP session data for monitored network communications). If Trcka and Ranum were considered together, these references may teach a system that could filter network data based on TCP control data. However, Trcka combined with Ranum would not teach the testing of claim 1 because there is no teaching to evaluate both TCP control data and user data payloads. Russell-Falla fails to overcome this deficiency of Trcka and Ranum. Therefore, claim 1 and claims 2-4, 6-8, 12, 13, 15, 17-21, 23, 27-33, and 65-67, which depend from claim 1, are believed allowable over the combined teaching of the three cited references.

Further, in the September 29, 2005 Office Action, claim 1 was rejected as being unpatentable over the combination of Russell-Falla and Trcka. In Applicant's December 28, 2005 Amendment, claim 1 was amended to add the "receiving" step to further clarify that the monitoring was performed based on user input and to modify the "testing" step to further define the preselected criterion relative to the received user input. Further, the lack of teaching or deficiencies of Russell-Falla and Trcka were discussed in detail, and Applicant argued that claim 1 was allowable over these two references. One of these deficiencies is the lack of teaching that the storing of the communications is performed only "if the presence of said at least one preselected criterion is determined." In this conditional storing, the preselected criterion is defined by a user, is associated with the user selected subject matter category, and comprises one or more regular expressions. The April 5, 2006 Office Action admits at the bottom of page 4 that Ranum has deficiencies but argues that Trcka and Russell-Falla overcome these deficiencies. Therefore, it may be useful to first discuss Russell-Falla and Trcka and their teachings relative to claim 1.

Specifically, claim 1 calls for storing of the communications when a preselected criterion is determined and calls for the user to define the criterion. Russell-Falla fails to teach either of these features of the claimed invention. Further, claim 1 calls for "receiving input from a user selecting a subject matter category for use in monitoring

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network communications," and this limitation is not shown or suggested by Russell-Falla. This is a significant failing of Russell-Falla because the Office Action admits that Ranum fails to disclose this user selection of a subject matter category but argues that Russell-Falla for providing the necessary teaching. As discussed below, Applicant strongly disagrees. Further, claims 1 calls for the criterion to be associated with the selected subject matter category and regular expressions to be associated with each category – hence, the user is able to select a category and define criterion including regular expressions. These features are not shown or suggested by Russell-Falla which, in contrast, teaches using a neural network to learn from inspecting thousands of web pages.

As noted in the prior Amendments, Russell-Falla does not suggest any means by which the user can select a subject matter category for use in monitoring network communications and defining a preselected criterion associated with the selected subject matter category. Hence, Russell-Falla fails to teach the receiving, testing, deleting, and storing steps of claim 1. Instead, Russell-Falla determines the contents of database 30 by a neural network or other automated analysis of large numbers of content examples. Applicant has found that the complexity of this analysis can be avoided by allowing a user to define predetermined expressions, as called for in claim 1. Moreover, user-defined criteria enable the user to express control and purpose in the defined criteria and so enable improved performance.

Applicant has urged the Examiner to carefully consider Russell-Falla's teaching from col. 6, line 49 to col. 8, line 3. In this section, Russell-Falla describes in detail its use of a neural-network in which each term in a list is initially assigned a weight "at random" and an algorithm is used to "arrive at a set of weightings" based on processing of "10,000 web pages." **No user input is provided at all during this learning process** as described in Russell-Falla as "training pages are statistically analyzed." In direct contrast to this teaching of automated learning based on processing large volumes of web pages, the method of claim 1 calls for testing stored

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communications for the presence of user-defined criterion associated with user selected subject matter category and including regular expressions. Hence, the "testing" element of claim 1 is not shown or suggested by Russell-Falla.

At the top of page 5, the Office Action cites Russell-Falla at col. 4, lines 45-60, col. 4, line 61 to col. 5, line 35, and at col. 5, lines 3-35 for teaching the use of subject matter categories for use in monitoring networks, testing communications, and that the criterion include regular expressions. At col. 4, lines 45-60, Russell-Falla discusses that its process can be used for differing content, such as pornography, racism, and the like. However, there is no teaching of a user selecting a subject matter category (where does the user provide input selecting one of these differing content types as a subject matter category?) or defining a criterion including one or more regular expressions (where are criterion for each of these contents said to be user defined and to include at least one regular expression?). At col. 4, line 61 to col. 5, line 35, Russell-Falla discusses comparing regular expressions from a web page that is analyzed before display on a user's display screen for matches with regular expressions in a database. There is no discussion here that a user selects a subject matter category. Therefore, the receiving step is not shown.

Additionally, there is no teaching that the criterion is defined by a user (e.g., it appears that the database is searched for matches without any input from a user identifying which regular expressions should be used or what weight should be given to such expressions). In other words, claim 1 is not claiming the use of regular expressions to find a match but rather that the regular expressions are part of a criterion defined by a user that in turn are associated with a subject matter that is selected by the user with received input. These features are not shown or suggested by the web page analysis tool of Russell-Falla.

Trcka does not overcome the deficiencies of Russell-Falla. Trcka does not teach a user selecting a category, defining criterion for inspecting network communications, and does not show that the categories may have regular

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expressions. Trcka does not teach any specific type of analysis that would be performed on the raw data packets. Hence, Trcka does not teach the step of testing the stored communication for the presence of at least one user-defined criterion. Further, Trcka does not show monitoring TCP/IP network communications. Trcka stores raw data packets at a network communication at a data link or lower level (e.g., Ethernet packets or lower). This is data below the transport level, and below the TCP/IP level called for in claim 1. Further, claim 1 calls for storing the communication in a conditional manner, "if the presence of at least one preselected criterion is determined." **Trcka teaches that all raw data packets are stored, not a process of storing some and deleting some as called for in claim 1.** Russell-Falla does not explicitly teach storing any of the communication. Accordingly, the combination of Russell-Falla and Trcka does not suggest the invention of claim 1.

Moreover, there is no teaching in the references as to how such a combination would be achieved. The references appear to teach against the combination suggested in the office action. Russell-Falla deals with analyzing a web page before it is displayed whereas Trcka specifically captures data passively without interrupting delivery. Russell-Falla must analyze HTML pages, not network packets, whereas Trcka must capture network packets at a very low level. The two references, as taught in the references themselves, describe incompatible systems. Only Applicant has recognized and invented a way for performing text analysis akin to what Russell-Falla is doing on HTML pages in an offline manner within a network connection, akin to what Trcka is doing at a data link layer.

Based on the foregoing discussion, Russell-Falla fails to teach the subject matter category selection by a user that the Office Action admits is not shown by Ranum or Trcka. Hence, claim 1 is allowable over these three references. Further, the above discussion shows that Trcka does not teach the storing, deleting, and storing steps of claim 1. The following discussion shows that Ranum also fails to show the combination of these three steps – as well as having other failings.

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Specifically, turning to Ranum, the Office Action cites Ranum for substantially teaching each and every limitation of claim 1. Applicant disagrees with this construction of Ranum. Ranum's Abstract describes its "Network Flight Recorder" or NFR as a "general purpose statistics-gathering system" that is useful for "building network traffic analysis and statistical event records." To this end, packet suckers are implemented to collect data packets that are compared to filters in a decision engine and once "a packet has been applied against the filters, it is discarded." A record mechanism "passes a constructed data structure to a backend recorder for further processing." In other words, a filter is applied to determine if a data packet includes a keyword or pattern that triggers an event, and if so, a constructed data structure is transmitted to a backend (such as a list backend or histogram backend) for further processing (such as developing statistics on network traffic such as visits to a particular URL, receipt of "spam", and the like). While the NFR provides statistics and monitors network traffic, it does so in a different way than called for in the method of claim 1 and fails to teach or suggest all the limitations (e.g., fails to overcome the deficiencies of Russell-Falla and Trcka).

More particularly, the Office Action cites Ranum at page 1, points 2 and 3 and page 2 the first paragraph under Decision Engine for teaching the receiving step of claim 1. Points 2 and 3 on page 1 states that "NNStat" had properties that include "flexible specification of types of events to record" and "flexible storage of information about the events that are observed." This fails to teach receiving user input selecting a subject matter category for use in monitoring network communications, with "flexible" having many meanings and there not being any teaching of subject matter categories and only event types. At the citation on page 2, Ranum discusses using a list of filters to check packets in the decision tree, such as to develop statistics for TCP traffic. There is no discussion of receiving user input or that such input is used to select subject matter categories for monitoring traffic (e.g., there is no discussion that the filters are grouped into subject matter categories or that a user can provide input to select groups of such filters). Hence, Ranum fails to teach the receiving step of claim

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1, and Russell-Falla and Trcka fail to overcome this deficiency as discussed above. As a result, claim 1 is allowable at least for this reason.

The Office Action also argues that Ranum teaches the testing step of claim 1 at pages 2 and 3 (Decision Engine), pages 5 and 6 (N-code filtering). Applicant disagrees because Ranum does not teach that its filtering is performed based on a user defined criterion or that such criterion is associated with the user-selected subject matter. There is no discussion under the Decision Engine that the filters are configured to apply a criterion that is user-defined and associated with a subject matter category that is selected by the user. GUI are described at page 5 but these are related to the backends and no mention is made of a user selecting or configuring the Decision Engine or its filtering processes. The N-Code Filtering that is discussed starting on page 5 includes syntax of a filter but fails to discuss testing based on user-defined criterion that may include regular expressions and that are associated with a subject matter category selected based on user input. Claim 1 also calls for the testing to be performed on "the stored communications" whereas much of the processing of Ranum is limited to backend processing of created data structures rather than on the actual communications (e.g., the building of lists or histograms). Hence, Ranum fails to show the specific testing step called for in claim 1.

The Office Action further indicates that Ranum teaches the conditional deleting and storing (i.e., the final two elements of claim 1) based on whether the preselected criterion is determined to be present in the stored communications. First, the deleting is said to be shown at page 2 in the second paragraph of the Decision Engine. Ranum teaches that once "a packet has been applied against the filters, it is discarded." This is not a conditional delete but instead teaches that all packets are discarded after that filter is applied to determine if an event has occurred. As a result, the deleting only when the criterion is not determined present is not shown or suggested by Ranum. The conditional storing is said to be shown with the "record mechanism" of Ranum. But, on page 2, the record mechanism is described as passing "a constructed data

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structure to a backend recorder for further processing." Apparently, this mechanism passes a constructed data structure to the backend recorder when called by a filter, but it is not described as passing the filter data packet, which was discarded after the filter was applied. Hence, Ranum fails to teach the conditional deleting and storing called for in claim 1, and Russell-Falla and Trcka were not cited for overcoming these deficiencies. Claim 1 is believed allowable for this additional reason.

Claims 2-4, 6-8, 12, 13, 15, 17-21, 23, 27-33, and 65-67 depend from claim 1 and are believed allowable over Ranum, Russell-Falla, and Trcka at least for the reasons provided for allowing claim 1. Further, claims 4 and 19 call for the regular expressions to be "assigned a weight by a user" and "receiving user input assigning a value to said predetermined expressions," which are not shown by any of the three references. The Examiner states that Russell-Falla teaches weighting of regular expression because its training sets that are used after a complex learning process is carried out to weight expressions are created by humans. Claim 4 calls for a weight to be assigned by a user to a regular expression, and the cited teaching of Russell-Falla does not directly or even by inference teach that its weighting of expressions are assigned but instead teaches assigning weights by a neural network with the user being unable to control the output or weight value actually assigned. Claims 4 and 19 are believed allowable for this additional reason.

Claim 8 calls for the regular expressions with a negative value within a subject matter category to be processed before those with a positive value or weight. The Office Action states that Russell-Falla teaches that the order is "mathematically arbitrary" and so, it is obvious to do it in either order or that it is an arbitrary design choice. However, Applicant's specification describes the process of looking for matches for negative values first (see, Figure 2 and related text) as this better controls false positives while also limiting the amount of processing required in the testing step to determine the presence of the preselected criterion (e.g., once a sum of the values/weights associated with the regular expressions equals or exceeds a threshold

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the criterion is determined to be satisfied or present in the stored communication – so, it is beneficial to process negatively weighted expressions first to reduce false positive results while still not requiring that all positively weighted expressions be processed). This is not a mere design choice or an obvious requirement, and it is only motivated by Applicant's specification as Russell-Falla teaches summing all weights for the matched expressions. Claim 8 is believed allowable for this additional reason.

Dependent claim 21 calls for the communication to be stored "if the sum of the values of said predetermined expressions comprising a subject matter category equal or exceed" a threshold. Ranum is cited for its teaching related to the record mechanism. But, as discussed earlier, the record mechanism transmits a constructed data record to a recorder and not the data packets, which were discarded after the filter was applied. Hence, for this additional reasons, Ranum fails to teach the method of claim 21.

Claims 31 and 33 are amended to call for a portion of the stored communications to be provided in a user interface or in a report in the form that it was viewed or generated during the monitored TCP/IP network communications. The cited references fail to show this limitation. The Office Action cites Ranum at pages 3 and 4 and its figures but these do not teach the requirement that the stored information be displayed as it was viewed or created during the monitored communications. Hence, claims 31 and 33 are believed allowable over the combined teaching of the references for this additional reason.

Further, the Office Action rejected claims 9 and 10 under 35 U.S.C. §103(a) as being unpatentable over Ranum in view of Trcka and Russell-Falla as applied to claim 4 and further in view of U.S. Pat. No. 5,878,423 ("Anderson"). This rejection is traversed based on the following remarks. Claims 9 and 10 depend from claim 1 and are believed allowable over Ranum, Trcka, and Russell-Falla at least for the reasons provided for allowing claim 1. Anderson is not cited for overcoming the deficiencies of these three references discussed with reference to claim 1.

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Also, the Office Action rejected claims 14, 22, 24, 25, and 26 under 35 U.S.C. §103(a) as being unpatentable over Ranum in view of Trcka and Russell-Falla as applied to claim 2 and further in view of U.S. Pat. No. 5,371,807 ("Register"). This rejection is traversed based on the following remarks. Claims 14, 22, 24, 25, and 26 depend from claim 1 and are believed allowable at least for the reasons provided for allowing claim 1 over Ranum, Trcka, and Russell-Falla. Further, Register fails to overcome the deficiencies of these three references discussed with reference to claim 1.

Still further, the Office Action rejected claims 34-36, 38, 39, 44, 47-55, 57-59, and 61-64 under 35 U.S.C. §103(a) as being unpatentable over Russell-Falla in view of Ranum and also in view of U.S. Pat. No. 5,835,722 ("Bradshaw"). This rejection is respectfully traversed.

Claim 34 calls for the threshold used to determine whether a monitored network session should be stored is selected based on user input. The Office Action, at the bottom of page 15, states that Russell-Falla fails to teach "storing the data when the data is determined to be within a category." Ranum's record mechanism is again cited for providing such storing. However, as discussed earlier, Ranum teaches that data packets are discarded after a filter is applied and that a constructed record is passed to a recorder when the mechanism is called from a filter. Hence, Ranum fails to teach "storing the remaining data" step of claim 1. Further, Ranum fails to teach that the threshold value for a category used for determining when storage occurs is selected based on user input. Bradshaw is cited but this reference at col. 7, lines 18-38 fails to discuss that a sum of values associated with predetermined expressions are compared to a threshold value that is set by a user for a category. Instead, Bradshaw only discusses setting addresses, email senders, keywords, and the like to be used in blocking communications. For these reasons, claim 34 is believed in condition for allowance.

Additionally, claim 34 is amended to include the limitations of dependent claims

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39 and 41, which call for the expressions to be weighted with negative or positive weights. Claim 34 also now calls for the testing and maintaining of sum values to be halted once a sum of values exceeds a user selected threshold value. These new limitations are not believed shown by any of the cited references, and, particularly, Russell-Falla is not believed to show summing by processing negative weighted values first. Clearly, Russell-Falla does not show halting other processing steps once the sum meets or exceeds a user defined threshold as this reference shows summing all weights for matched expressions. For these additional reasons, claim 34 is believed in condition for allowance.

Further, as discussed in the prior Amendments, claim 34 calls for removing data content that does not contain language elements and then testing the "remaining content." The Office action cites a portion of Russell-Falla that relates to scanning an HTML page for regular expressions. It appears that the entire HTML page is used as input for analysis, including non-language elements. Russell-Falla does not show or suggest any activity of removing data content that does not contain language elements. At col. 5, lines 5-11, Russell-Falla is said to teach "the act of identifying and analyzing natural language elements", and the Examiner argues that this is within the scope of the removing data step of claim 34. However, such identifying does not indicate or teach that the other content was removed or that later the "remaining data" is to be stored (i.e., not the removed content). Hence, the removing data content step is not shown by Russell-Falla. Ranum teaches creating a data structure for transmittal to a recorder but this data structure is not defined as data of a communication remaining after "data content that does not contain language elements" is removed. Bradshaw is not cited for teaching the storing element of claim 34. For these additional reasons, claim 34 is not shown or suggested by the combined teaching of the references.

Further, as discussed in prior Amendments, Russell-Falla does not show or fairly suggest capturing data on a network comprising multiple half sessions of TCP/IP

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network communications. An HTML page comprises text data extracted from one or more TCP packets that are assembled at the browser according to the HTML rules. HTML is a markup language, not a protocol. Accordingly, an HTML page does not, by itself, define a "session" or "half session". An HTML page, like any computer file, may be delivered over a network communication protocol, however, the HTML page is itself entirely independent of any particular network communication protocol. Hence, an HTML page is by and intent design entirely unaware of any concept of "session" that exists on the network itself and so cannot satisfy the claim limitation "wherein the data comprises multiple half sessions..." appearing in claim 34.

The HTML page is distinct from a TCP/IP half session. Significantly, the a TCP/IP (or other network level) communication typically includes a wide variety of non-HTML information. This data may include header information, cookies, parameter information, and the like. In some cases the network communication may include malicious (or benevolent) code or hidden data that "piggy backs" on the network communication packets used to deliver an HTML page. This is equally true of other applications such as email, instant messaging, and the like. This piggy backed data is not a part of the HTML page in Russell-Falla, but it is a part of the captured half session in claim 34. Hence, this data will escape analysis in Russell-Falla but will be subject to monitoring by the invention of claim 34.

Claims 35, 36, 38, 39, 44, and 47-54, which depend on claim 34, are allowable for at least the same reasons as claim 34 set out above. Also, claims 52 and 54 are believed allowable for the additional reasons provided above for claims 31 and 33.

Independent claim 55 is directed to a method with limitations similar to those of claim 34, and, as a result, the reasons for allowing claim 34 are believed equally applicable to claim 55.

Additionally, claim 55 is amended to call for "removing data content that does not contain language elements and storing a remaining content comprising a string of language elements separated by spaces without regard to original formatting of the

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captured TCP/IP data." After this normalization function is performed on the captured network data the remaining content is protocol and data format independent, which allows later processing using generic patterns that are protocol and document independent (e.g., the "predetermined expressions" used in the testing step do not have to be configured to be useful with specific communication protocols or specific document or data formatting). The generation of such normalized data or "remaining content" is not shown or suggested by any of the three cited references.

Specifically, none of the cited references teach a method of transforming digital data that is captured or collected from network traffic into a normalized form before applying predetermined expressions (such as patterns or regular expressions) to the data. Russell-Falla teaches implementation of patterns for filtering and analysis of HTML pages. The patterns described in Russull-Falla are specific to this data form or to HTML and, hence, there is no need for the normalizing or removing step of claim 55. Ranum's N-Code, as discussed above, is taught to be applied to TCP Session Control information, and there is no teaching of the removing and storing of remaining content as called for in claim 55. Trcka teaches filtering by using TCP Session Control information, IP addresses, time stamps, and other network transmission information, but Trcka fails to teach or suggest the removing and storing of format independent data that can more easily be tested for predetermined expressions as called for in claim 55. As can be seen, none of the three cited references teach transformation of captured network data into a normalized form such as "a string of language elements separated by spaces without regard to original formatting." In fact, the references such as Russell-Falla require the processes data to have a particular form for their techniques to be effective whereas the method of claim 55 is protocol and format independent. The Office Action cites Russell-Falla at col. 5, lines 5-11, but Applicant's believe the amended language clearly distinguishes this portion of Russell-Falla that merely discusses scanning a page to look for regular expressions without teaching the storing of the remaining content as called for in claim 55. For these additional reasons, claim 55 is not obvious in light of the combined teaching of the references

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because they fail to show the removing data content limitation in its amended form.

Yet further, claim 55 calls for, among other things, "defining categories with weighted predetermined expressions" (emphasis added) and "maintaining a sum of values associated with said predetermined expressions found within each category." These features of claim 55 are not shown or suggested in Russell-Falla at the cited col. 4. lines 45-67 which only discusses content that can be searched for in a web page but does not teach applying multiple, defined categories and then, maintaining a sum of values for each one of multiple categories. Applicant maintains the position that Russell-Falla teaches away from using multiple categories. Moreover, if one were to modify Russell-Falla as suggested in the Office action, one might, by happenstance or invention, come up with the solution called for in claim 55. However, that solution is not taught or suggested by the reference itself. Further, claim 55 calls for storing the remaining data if the sum of values associated with said predetermined expressions present within a category exceeds a threshold value. As discussed with reference to claim 34, this is not shown by Russell-Falla or in Ranum and Bradshaw. For at least these reasons, claim 55, and claims 57-59 and 61-64, which depend from claim 55, are allowable over the cited references. Also, claim 64 is believed allowable for the additional reasons provided for claim 31.

Additionally, claims 40-43 were rejected under 35 U.S.C. §103(a) based upon Russell-Falla in view of Ranum and Bradshaw as applied to claim 39 and further in view of Anderson. Claims 40, 41, and 43 are cancelled with some of their limitations being added to base claim 34. Claim 42 depends from claim 34 and is believed allowable over Russell-Falla, Ranum, and Bradshaw for the reasons provided for allowing claim 34. Anderson is cited for teaching prioritization, but Anderson fails to teach the limitation of claim 42 that the expressions having positive and negative values be processed separately and that the larger absolute values be processed first. Russell-Falla is cited for not requiring an order, and the Examiner argues that this is mathematical arbitrary and/or a design choice. With the limitations added to claim 34,

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the order of processing is not arbitrary as it will have a real effect on when the testing, maintaining of sum values, and storing steps are performed and the number of expressions that need be evaluated (e.g., processing may halt after only one or more positive value expressions are evaluated if a sum matches or exceeds a threshold but acting on negative values first reduces the risk of false positives; in contrast, Russell-Falla appears to teach that all expressions are matched and an overall sum obtained but not a cumulative one that is compared with a threshold on a step-by-step basis). For these reasons, claim 42 is believed allowable over the cited references.

Still further, the Office Action rejected claims 45, 46, and 56 under 35 U.S.C. §103(a) as being unpatentable over Russell-Falla in view of Ranum and Bradshaw as applied to claim 34 and further in view of Register. This rejection is also traversed based on the following remarks. Claims 45 and 46 depend from claim 34 and are believed allowable at least for the reasons for allowing claim 34. Claim 56 depends from claim 55 and is believed allowable at least for the reasons for allowing claim 55. Register does not overcome the deficiencies of the other 3 references as discussed with reference to claims 34 and 55.

Finally, the Office Action rejected claim 68 under 35 U.S.C. §103(a) as being unpatentable over Ranum in view of Trcka and Russell-Falla as applied to claim 1 and further in view of U.S. Pat. No. 5,850,388 (C. Anderson). Claim 68 depends from claim 1, and hence, the reasons for allowing claim 1 over Ranum, Trcka, and Russell-Falla are applicable to claim 68. Further, claim 68 is amended to clarify how the matching of known protocols is used to enhance processing of a stored communication. As amended, the method of claim 68 is not believed to be shown by C. Anderson. C. Anderson is cited for teaching protocol identification in a data stream, but this reference does not teach testing of independent parts of a communication for preselected criterion based on an identified known protocol pattern. For this additional reason, claim 68 is believed in condition for allowance.
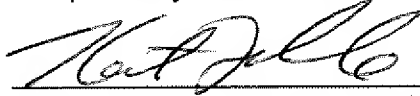
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Conclusion

In view of all of the above, it is requested that a timely Notice of Allowance be issued in this case. If the Examiner disagrees with this conclusion, Applicant respectfully requests that the Examiner grant the Applicant the opportunity for a telephonic interview at his convenience.

The fee associated with a time extension is provided with this filing. No other fee is believed due with this response, but any fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

Respectfully submitted,

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